UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/939,347	08/24/2001	Amber D. Huffman	42390.P11759	3611

7590 03/29/2006	**EXAMINER**
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ART UNIT	PAPER NUMBER
2616	

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Please find below and/or attached an Office communication concerning this application or proceeding.

	Office Action Summary	Application No.	Applicant(s)
		09/939,347	HUFFMAN, AMBER D.
		Examiner	Art Unit
		Anh-Vu H. Ly	2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>07 November 2005</u>.
2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-18</u> is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☐ Claim(s) <u>1-18</u> is/are rejected.
7)☒ Claim(s) <u>11,17 and 18</u> is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on <u>07 November 2005</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   This communication is in response to applicant's amendment filed November 7, 2005.

Claims 1-18 are pending.

Claim Objections

2.   Claims 11, 17, and 18 are objected to because of the following informalities:

With respect to claim 11, in line 1, "The computer system of claim 1" should be changed

to --The computer system of claim 6-- since claim 1 recites a method and claim 6 recites a

computer system.

With respect to claims 17 and 18, in line 1, "The method of claim 16" should be changed

to --The article of manufacture of claim 16-- since claim 16 recites an article of manufacture.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section
122(b), by another filed in the United States before the invention by the applicant for
patent or (2) a patent granted on an application for patent by another filed in the United
States before the invention by the applicant for patent, except that an international
application filed under the treaty defined in section 351(a) shall have the effects for
purposes of this subsection of an application filed in the United States only if the
international application designated the United States and was published under Article
21(2) of such treaty in the English language.

3.   Claims 1 and 5-15 are rejected under 35 U.S.C. 102(e) as being anticipated by

Diepstraten et al (US Pub 2003/0026198). Hereinafter, referred to as Diepstraten.

With respect to claims 1 and 15, Diepstraten discloses a method comprising:

transmitting data symbols from a media access control layer (MAC) processing element

to a second processor (page 4, 52nd paragraph and Fig. 3, between MAC controller 302 and DSP

303 I/O data are exchanged, e.g., data to transmit, data received, clock signal, control signal);

and

monitoring a receive signal strength indicator (RSSI) value at the MAC processing

element to determine if the data symbols have been completely transmitted from a system

transmitter (pages 4-5, 55th paragraph, upon reception of a signal, the receiver control device 309

will process the signal to determine its power level and subsequently will send a reporting signal

to the MAC controller 302 that a carrier signal was detected to indicate that the medium is not

free for transmission. The MAC controller 302 then defers from starting a transmission in order

to avoid collision with the transmission in progress. Herein, the MAC controller 302 monitors

the received signal level or signal strength (RSSI) of the transmitted data symbols of another

station or a system transmitter to determine whether that station has finished its data

transmission).

With respect to claim 5, Diepstraten discloses that wherein the second processor is a

baseband processor (Fig. 3, DSP 303 performing modulation and demodulation of baseband

signals).

With respect to claim 6, Diepstraten discloses a computer system (Fig. 1) comprising a

network controller (Fig. 3, element 301), the network controller including a media access layer

(MAC) digital signal processor (DSP) (Fig. 3, MAC controller 302) to monitor a receive signal

strength indicator (RSSI) value to identify that the transmission of all data symbols from the

network controller has been completed (pages 4-5, 55th paragraph, upon reception of a signal, the

receiver control device 309 will process the signal to determine its power level and subsequently

will send a reporting signal to the MAC controller 302 that a carrier signal was detected to

indicate that the medium is not free for transmission. The MAC controller 302 then defers from

starting a transmission in order to avoid collision with the transmission in progress. Herein, the

MAC controller 302 monitors the received signal level or signal strength (RSSI) of the

transmitted data symbols from a network controller of another station to determine whether that

station has finished its data transmission).

With respect to claim 7, Diepstraten discloses that wherein the network controller further

comprises a baseband DSP coupled to the MAC DSP (Fig. 3, DSP 303 coupled to MAC

controller 302), wherein the MAC DSP begins to monitor the RSSI value after all data symbols

have been transmitted from the media access layer DSP to the baseband DSP (pages 4-5, 55th

paragraph, upon reception of a signal, the receiver control device 309 will process the signal to

determine its power level and subsequently will send a reporting signal to the MAC controller

302 that a carrier signal was detected to indicate that the medium is not free for transmission.

The MAC controller 302 then defers from starting a transmission in order to avoid collision with

the transmission in progress. Herein, the data must be transmitted to the DSP 303 first before the

MAC controller 302 makes a determination when to start a transmission according to the

measured signal level).

With respect to claims 8 and 13, Diepstraten discloses that wherein the baseband DSP comprises:

a baseband state machine (Fig. 4, baseband processing 306);

a coding element coupled to the baseband state machine (Fig. 4, receiver control element 309); and

a modulation element coupled to the coding (Fig. 4, data processing 308).

With respect to claim 9, Diepstraten discloses that wherein the network controller comprises:

a DAC DSP coupled to the baseband DSP (not shown in Fig. 3 since Fig. 3 illustrating a received processing step but not the transmitting processing step, but the DAC must be there for converting the digital signal to analog signal for transmitting over the antenna).

an ADC DSP coupled to the baseband DSP (Fig. 4, A/D 307).

With respect to claims 10 and 14, Diepstraten discloses that wherein the network controller further comprises:

a transceiver that transmits the RSSI to the MAC DSP (pages 4-5, 55th paragraph, upon reception of a signal, the receiver control device 309 will process the signal to determine its power level and subsequently will send a reporting signal to the MAC controller 302 that a carrier signal was detected to indicate that the medium is not free for transmission); and

an antenna coupled to the transceiver (Fig. 2, antenna 31).

With respect to claim 11, Diepstraten discloses a system input/output (I/O) bus coupled to

the network controller (Fig. 2b, I/O 132); a bridge/memory controller coupled to the system I/O

bus (Fig. 2b, processor 121); and a processor coupled to the bridge/memory controller (Fig. 3,

MAC controller 302 of the interface card 130 coupled to the processor 121).

With respect to claim 12, Diepstraten discloses a network controller (Fig. 3, element 301)

comprising:

a media access layer (MAC) digital signal processor (DSP) (Fig. 3, MAC controller 302)

to monitor a receive signal strength indicator (RSSI) value to identify that the transmission of all

data symbols from the network controller has been completed (pages 4-5, 55th paragraph, upon

reception of a signal, the receiver control device 309 will process the signal to determine its

power level and subsequently will send a reporting signal to the MAC controller 302 that a

carrier signal was detected to indicate that the medium is not free for transmission. The MAC

controller 302 then defers from starting a transmission in order to avoid collision with the

transmission in progress. Herein, the MAC controller 302 monitors the received signal level or

signal strength (RSSI) of the transmitted data symbols from a network controller of another

station to determine whether that station has finished its data transmission);

a baseband DSP, coupled to the MAC DSP (Fig. 3, DSP 303 coupled to MAC controller

302); and

a DAC DSP coupled to the baseband DSP (Fig. 4 illustrating a ADC 307 in the received

processing element of the DSP 303, a DAC must also be presented in the transmitted processing

element of the DSP 303 for converting the digital signal to analog signal for transmitting over the

antenna even though it is not shown).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or
> described as set forth in section 102 of this title, if the differences between the subject
> matter sought to be patented and the prior art are such that the subject matter as a whole
> would have been obvious at the time the invention was made to a person having ordinary
> skill in the art to which said subject matter pertains. Patentability shall not be negatived
> by the manner in which the invention was made.

4.   Claims 2-4 and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Diepstraten et al (US Pub 2003/0026198 A1) in view of Wang et al (US Patent No. 6,005,853).

Hereinafter, referred to as Diepstraten and Wang.

With respect to claims 2-4 and 16-18, Diepstraten discloses a wireless LAN with

enhanced carrier sensing (Fig. 3). Diepstraten does not disclose determining whether the RSSI

value drops below a predetermined threshold, monitoring RSSI value if it is determined that the

RSSI value has not dropped below the predetermined threshold and setting one or more timers if

it is determined that the RSSI value has dropped below the predetermined thredshold. Wang

discloses a wireless network access scheme including MAC devices, monitoring RSSI value, and

setting a timer when RSSI value falls below a threshold, if the RSSI falls below the threshold,

the channel state machine enters a channel _clear state, referred to as a clear timer (col. 10, lines

23-46). It would have been obvious to one having ordinary skill in the art at the time the

invention was made to compare the RSSI value to a threshold and set a timer if the RSSI value

falls below the threshold in Diepstraten's system, as suggested by Wang, to detect and avoid

collisions when there are data need to be transmitted.

Response to Arguments

5.   Applicant's arguments filed November 07, 2005 have been fully considered but they are

not persuasive.

Applicant argues in page 8 that Diepstraten fails to disclose monitoring a receive signal

strength value at the MAC processing element to determine if the data symbols have been

completely transmitted from a system transmitter. Examiner respectfully disagrees. Diepstraten

discloses that upon reception of a signal, the receiver control device 309 will process the signal

to determine its power level and subsequently will send a reporting signal to the MAC controller

302 that a carrier signal was detected to indicate that the medium is not free for transmission.

The MAC controller 302 then defers from starting a transmission in order to avoid collision with

the transmission in progress. Herein, the MAC controller 302 monitors the received signal level

or signal strength (RSSI) of the transmitted data symbols of another station or a system

transmitter to determine whether that station has finished its data transmission (pages 4-5, 55th

paragraph).

Conclusion

6.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing

date of this final action.

　　　Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Anh-Vu H. Ly whose telephone number is 571-272-3175. The

examiner can normally be reached on Monday-Friday 7:00am - 4:00pm.

　　　If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Chi Pham can be reached on 571-272-3179. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

　　　Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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